

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Device for measurement of the rotational angle of two components that can be rotated relative to each other, with a bushing and shaft stub (30, 33) that can be coupled to rotate in unison with the first component (50), with a materialized measure (10) connected coaxially and rotating in unison with bushing and shaft stub (30, 33), and with a sensing device (20) that optically senses the materialized measure (10) connected to rotate in unison with the second component (51),

characterized by the fact that the materialized measure (10) has an angular lattice structure (12), that the sensing device (20) has a circular track of optical sensor elements (21) spaced apart at an angle and arranged coaxially to bushing and shaft stub (30, 33), that a light source (31) is arranged coaxially in bushing and shaft stub (30, 33), that the light source (31) illuminates the materialized measure (10), that the sensing device (20) is arranged on the side of the materialized measure (10) opposite light source (31), that the shaft stub (33) is inserted coaxially into the first component (50), that the shaft stub (33) is inserted axially alignable in the first component (50), that the sensing device (20) is arranged in a cap (40) mountable on the second component (51), and that an inductive current is fed to the light source (31) via a coil (44) arranged in cap (40) to a coil (34) in bushing and shaft stub (30, 33), and rotating therewith.

2. (Canceled)

3. (Currently Amended) Device according to claim 1, characterized by the fact that [[the]] a marker element (13) connected to rotate in unison with bushing and shaft stub (30, 33) influences the light impinging on sensor elements (21) according to its angular position for at least one sensor element (21) associated with this angular position, that the sensor elements (21) can be electronically polled, and the marker element (13) and the materialized measure (10) are formed on a common disk (11).

4. (Original) Device according to claim 3, characterized by the fact that the materialized measure (10) has an angular lattice structure (12) with equidistant angle division and the marker element (13) is formed by an irregularity of this angle division.

5. (Previously Presented) Device according to claim 1, characterized by the fact that at least a second marker element (14) is provided, which is arranged offset at an angle relative to the first marker element (13).

6. (Currently Amended) Device according to claim 5, characterized by the fact that the marker elements (13, 14) are offset relative to each other at an angle different from 180° that preferably lies close to 180° .

7. (Previously Presented) Device according to claim 1, characterized by the fact that the materialized measure (10) generates in the optical sensor elements (21) at least an incrementally counted sine signal and a cosine signal phase-shifted by 90° relative to it.

8. (Original) Device according to claim 7, characterized by the fact the signals generated by the materialized measure (10) in the optical sensor elements (21) are sensed at angular positions of the circular track which are offset relative to each other by 90°.

9. (Previously Presented) Device according to claim 1, characterized by the fact that the sensor elements (21) are individually polled by a multiplex circuit (24).

10. (Canceled)

11. (Canceled)

12. (Currently Amended) Device according to claim [[11]] 1, characterized by the fact that the shaft stub (33) is designed as an expanding shaft and is inserted with a force-fit into a blind hole (53) of the first component (50).

13. (Currently Amended) Device according to claim [[11]] 1, characterized by the fact ~~that the sensing device (20) is arranged in a cap (40) mountable on the second component (51), and that~~ the bushing and shaft stub (30, 33) with the materialized measure (10) is pressed into the first component (50) and is axially aligned by means of tool (60) corresponding to this cap (40).

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14. (Previously Presented) Device according to claim 1, characterized by the fact that the first component is the motor shaft (50) of a motor and the second component is the motor housing (51) of the motor.

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AMENDMENTS TO THE TITLE

Please replace the original title with the following amended title:

DEVICE FOR MEASUREMENT OF ROTATIONAL ANGLE OF TWO COMPONENTS
RELATIVE TO EACH OTHER